1-20. (CANCELED)

21. (NEW) A method for generating cold and heat by magnetic effect comprising the steps of:

circulating a mixture of transmitting fluid containing particles comprising of one or more of a magneto-calorific material, a phase-change material, a superconductive material, and a mixture of such materials, through a principal circuit (13) having a first heat exchanger (11) and a second heat exchanger (12) connected in series;

generating a magnetic field in the first heat exchanger (11) using magnetic elements (14) associated with the first heat exchanger (11);

situating the second heat exchanger (12) outside the magnetic field in order for the particles to undergo a temperature increase when the particles pass through the magnetic field and undergo cooling when the particles leave the magnetic field;

extracting heat from the first heat exchanger (11) by means of a hot circuit (15); and

extracting cold from the second heat exchanger (12) using a cold circuit (16).

22. (NEW) The method according to claim 21, further comprising the step of providing the transmitting fluid in one of a liquid or gas state.

23. (NEW) The method according to claim 21, further comprising the step of providing the transmitting fluid as a heat-transmitting liquid.

24. (NEW) The method according to claim 21, further comprising the step of providing the transmitting fluid as a nano-fluid.

25. (NEW) The method according to claim 21, further comprising the step of providing the transmitting fluid as a suspension.

26. (NEW) The method according to claim 21, further comprising the step of providing the transmitting fluid as a multi-functional type of fluid.

27. (NEW) The method according to claim 21, further comprising the step of providing the particles of magneto-calorific material as one single material.

28. (NEW) The method according to claim 21, further comprising the step of providing the particles as generally spherical in shape with an average dimension range of 10 μm to 1000 μm.

29. (NEW) The method according to claim 21, further comprising the step of providing the particles as having different shapes and dimensions.

30. (NEW) The method according to claim 21, further comprising the step of insulating the second heat exchanger (12) from the magnetic field generated in the first heat exchanger (11).

31. (NEW) The method according to claim 21, further comprising the step of circulating the mixture from the principal circuit (13) and one or more of the mixture from the hot circuit (15) and the cold circuit (16) in opposite directions, respectively, through the first and the second heat exchanger (11, 12, respectively).

32. (NEW) A method of generating cold and heat by magneto-calorific effect comprising the steps of;

circulating a mixture of heat-transmitting fluid and particles comprising at least a superconductive material in a principal circuit (13) having a first heat exchanger (11) connected to a second heat exchanger (12);

generating a magnetic field in the first heat exchanger (11) by magnetic elements (14) associated with the first heat exchanger (11);

circulating the mixture in the second heat exchanger (12) which is located outside the magnetic field so the particles of superconductive material undergo a rise in temperature when the particles of superconductive material pass through the magnetic field to heat the mixture in the first heat exchanger (11);

cooling the mixture in the second heat exchanger (12) with the particles of superconductive material which undergo cooling when leaving the magnetic field;

extracting heat from the first heat exchanger (11) using at least one hot circuit (15); and

extracting cold from the second heat exchanger (12) using at least one cold circuit (16).

33. (NEW) A device for generating cold and heat by magnetic effect comprising at least one heat exchanger, the device comprising:

a principal circuit (13) comprising a first heat exchanger (11) and a second heat exchanger (12) connected in series through which circulates a mixture of transmitting fluid containing particles comprising one or more of a magneto-calorific material, a phase-change material, a superconductive material, or a mixture of such materials.

magnetic elements (14) for generating a magnetic field in the first heat exchanger (11) so that the particles undergo a rise in temperature when passing through the magnetic field and undergo cooling upon leaving the magnetic field;

a hot circuit (15) connected to the first heat exchanger (11); and

at least one cold circuit (16) connected to the second heat exchanger (12).

34. (NEW) The device according to claim 33, wherein the magnetic elements (14) comprise permanent magnets.

35. (NEW) The device according to claim 33, wherein the magnetic elements (14) comprise electromagnets.

36. (NEW) The device according to claim 33, wherein the magnetic elements (14) are designed to generate a variable magnetic field.

37. (NEW) The device according to claim 33, wherein the first heat exchanger (11) comprises an exterior envelope (11a) and interior conduits (11b), the interior conduits (11b) serving as vehicles for a heat-transmitting fluid (15a) from the hot circuit (15) and submerged in the mixture of transmitting fluid and particles (13a) from the principal circuit (13), the magnetic elements (14) constitute the exterior envelope (11a) of the heat exchanger (11).

38. (NEW) The device according to claim 33, wherein the first heat exchanger (11) comprises an exterior envelope (11a) and interior conduits (11b), the interior conduits (11b) serving as vehicles for a heat-transmitting fluid (15a) from the hot circuit (15) and submerged in the mixture of transmitting fluid and particles (13a) from the principal circuit (13), the magnetic elements (14) constitute a first portion of the exterior envelope (11a) of the heat exchanger, a second portion consisting of a tube (11c) concentric to the magnetic elements (14).

39. (NEW) The device according to claim 33, wherein the first heat exchanger (11) comprises an exterior envelope (11a) and interior conduits (11b), the interior conduits (11b) serving as vehicles for a heat-transmitting fluid (13a) from the principal circuit (13) and submerged in a transmitting fluid (15a) from the hot circuit (15), the magnetic elements (14) constitute walls of the interior conduits (11b).

40. (NEW) The device according to claim 33, wherein the first heat exchanger (11) comprises an exterior envelope (11a) and interior conduits (11b), the interior conduits (11b) serving as vehicles for a heat-transmitting fluid (13a) from the principal circuit (13) and submerged in a transmitting fluid (15a) from the hot circuit (15), the

magnetic elements (14) constitute a first portion of walls of the interior conduits (11b) of the heat exchanger (11), a second portion comprising of tubes (11d) concentric to the magnetic elements (14) and located inside the elements.